Rec'd PCT/PTO 16 MAY 2005

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 10 June 2004 (10.06.2004)

PCT

(10) International Publication Number WO 2004/048711 A1

(51) International Patent Classification⁷: E04C 3/292, F16B 15/00

E04B 1/38,

(21) International Application Number:

PCT/AU2003/001558

(22) International Filing Date:

21 November 2003 (21.11.2003)

(25) Filing Language:

English

(26) Publication Language:

English

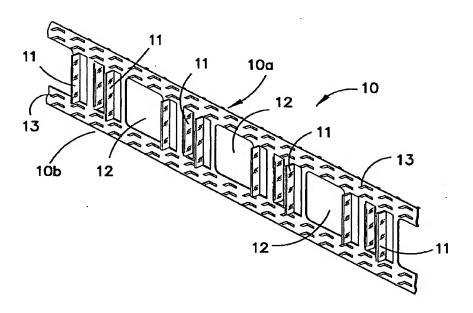
- (30) Priority Data: 2002952898 22 November 2002 (22.11.2002) At
- (71) Applicant (for all designated States except US): TECBEAM AUSTRALIA PTY LTD [AU/AU]; 58 Dandenong Street, Dandenong, Victoria 3175 (AU).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): LOGAN, Brian, Russell [AU/AU]; 27 Glenmore Crescent, Black Rock, Victoria 3193 (AU). NANKIN, Richard [AU/AU]; 25 Oswald Street, Dandenong, Victoria 3175 (AU). CHIVERS,

William, Roy [AU/AU]; 1 Carr Street, Colac, Victoria 3250 (AU).

- (74) Agent: GRIFFITH HACK; 509 St Kilda Road, Melbourne, Victoria 3004 (AU).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU; IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: COMPOSITE BEAMS



(57) Abstract:—A metal connector (10) for use in the fabrication of structural I-beams having upper and lower flanges in which each flange includes a pair of timber members, the connector having two spatially separated attachment sections (10a, 10b) that can be located between the timber members of each flange, wherein at least one of the attachment sections has a plurality of spikes (13) projecting outwardly from opposite sides that are capable of piercing and fastening one pair of timber members to the connector to form one of the flanges of the beam.